Meetings

Experts debate alternatives to mastectomy

JUDITH KOHN

The big question for me is, "Would I choose conservative surgery and radiation therapy for my wife and mother if they had early breast cancer?" a surgeon asked during an international conference on "The Alternatives to Mastectomy, 1982", held recently in Cambridge, Massachusetts.

"Well, would you?" somebody within earshot wanted to know. "I'll tell you Monday morning after I've listened to all the evidence and had a chance to digest it", he replied. This surgeon's state of mind reflected a common concern among the 500 surgeons, radiation therapists, oncologists and mammographers who attended the conference, cosponsored by the Joint Center for Radiation Therapy and the departments of radiation and surgery, Beth Israel Hospital and Harvard Medical School.

The "evidence" presented to them at the 3-day meeting included up-to-date interpretations of both retrospective and prospective, randomized studies, done here and abroad over the 5 to 20 years, which compare mastectomy to lesser surgery and radiation therapy as the primary treatment of early breast cancer. "Evidence" also included precise descriptions of surgical and radiation techniques practised in world centres with reference to patient selection, recurrence of disease, survival, complications, and cosmetic results. In addition, new light was shed on breast pathology as it relates to local tumour control and multifocal disease.

Finally, a group of clinical investigators presented preliminary data on the use and integration of adjuvant chemotherapy with primary radiation therapy.

Dr. Jay Harris, clinical director of the Joint Center for Radiation Therapy, Boston, Massachusetts, opened the conference by explaining its goals and the format which would be followed. During the next 3 days, he said, we shall hear experts on breast cancer from the United States, Canada, England, Italy, Switzerland and France. On the basis of their joint clinical experience, an exchange of ideas, some debate, and a review of mature studies — some 20 years old — we shall attempt to determine which patients are candidates for radiation therapy, what is the optimal technique for radiation therapy, how much surgery should be performed on the primary tumour and how extensive axillary dissection should be.

We shall attempt to answer these and other previously unresolved questions regarding the treatment of breast cancer and, whenever possible, to reach concensus, Dr. Harris told the meeting. We shall also attempt to define areas in which more work needs to be done.

Concurrence was reached on some but not all issues. No one went so far as to say mastectomy should be put on the shelf with the leeches, but a significant statement was made on the issue. In today's clinical practice some form of local excision with radiation therapy is equivalent to mastectomy in treating breast cancer with respect to recurrence of disease, overall survival, and complications, they said. And with respect to cosmesis, it is superior.

Commenting on that statement, Dr. Umberto Veronesi, director of the National Cancer Institute, Milan, Italy, and a proponent of quadrantectomy, complete axillary dissection, and radiotherapy, emphasized the need for a sophisticated team consisting of a surgeon, pathologist, oncologist and radiotherapist, if conservative surgery and radiation therapy is chosen as the primary treatment. "Otherwise there is a risk to the patient", he warned. "Indeed, bad surgery and bad sampling by poorly trained or untrained personnel have given conservative surgery a bad name. With a good team, however, good follow-up, and the possibility for scientific assessment, physicians should be authorized to substitute conservative surgery and radiation therapy for mastectomy."

Dr. Reinhard Hünig from the department of radio-oncology, Uni-

"No one went so far as to say mastectomy should be put on the shelf with the leeches . . . in today's clinical practice some form of local incision with radiation therapy is equivalent to a mastectomy in treating breast cancer with respect to recurrence of disease, overall survival, and complications, they said."

Judith Kohn is a freelance medical writer living in Avon, Connecticut.

versity Hospital, Basel, Switzerland, agreed completely with Dr. Veronesi: "Unless there is an experienced team working in close cooperation, the patient pays", he noted. Dr. Danièle Sarrazin, chief of service of radiation therapy, Institut Gustave Roussy, Villejuif, France, echoed their convictions.

John Hayward, MB, director of the Imperial Cancer Research Fund Breast Cancer Unit at Guy's Hospital, London, England, was not quite so enthusiastic. "There will always be a place for mastectomy in the management of breast cancer", he said, [especially in light of the fact that] "so much more needs to be learned about the presently used techniques." Dr. Veronesi answered that indications for mastectomy are very limited today, citing three reasons for his conviction. First, he said, concepts on the natural history and loco-regional spread are changing; second, patients are presenting with smaller tumours than ever before; and third, the patients, themselves, are changing. They come to us now with more knowledge about their choices than ever before.

Although somewhat different criteria are used in different centres to select patients for conservative surgery and radiation, a consensus was reached on the subject. Panelists concurred that the technique should be available to the overwhelming majority of patients and that only those with gross evidence of multifocal disease should be excluded from treatment because the amount of radiation required for local tumour control precludes good cosmetic results. Patients with large tumours should probably be excluded as well, they agreed, because good cosmesis cannot be achieved if too much tissue must be excised relative to breast size. These patients do better with mastectomy and reconstruction.

No consensus was reached on the question of how extensive the excision should be in so-called conservative surgery. The experts did agree, however, that at the very least tumours should be completely removed and that some type of local tumour control should be achieved. Dr. Eleanor Montague, a radiotherapist at the M.D. Anderson Hospital and Tumor Clinic, Houston, Texas, reported that at her institution they perform re-excisions, if insufficient margins have not been removed in the original biopsy.

Dr. Caldwell Esselstyn, Jr., a surgeon at the Cleveland Clinic Foundation, Cleveland, Ohio, performs segmental resection, which is essentially a quadrantectomy. Dr. Veronesi also advocates quadrantectomy, which is the operation done in his institution. Mr. Hayward, on the other hand, feels "quadrantectomy is a rotten operation."

Absolutely no consensus could be reached regarding axillary sampling versus complete axillary dissection, when and if to irradiate the axilla, or if arm edema is a severe problem or even a problem. Panelists did concur, however, that the status of the axillary lymph nodes must somehow be determined. They could not, though, agree on how many nodes must be removed to get that information.

Dr. Veronesi and his colleagues do a complete nodal dissection, as do Drs. Hayward, Esselstyn, and Ernest deMoss, senior investigator, surgery branch, National Cancer Institute, Bethesda, Maryland. "While complete axillary dissection is burdensome and in time may be proved unnecessary, we feel that it is important and justified prior to radiation therapy or mastectomy, Dr. deMoss said. It provides staging information to determine treatment, important prognostic information, and reduces the threat of axillary disease", he explained. At the Cleveland Clinic, Dr. Esselstyn and others have abandoned sampling in favour of complete dissection. Their rational is twofold: to get maximum information about the disease and to avoid the necessity of irradiating the axilla, which they feel causes fibrosis. Although arm edema can occur with complete axillary dissection, Dr. Esselstyn reminded panelists and members of the audience that "we must remember to evaluate morbidity in terms of patient survival".

Some studies indicate that arm edema is associated with complete axillary dissection, axillary irradiation, or both. It is not surprising, therefore, that the axilla is treated in some centres and not in others. Dr. Leslie Wise, professor of surgery, State University of New York

and chairman of the department of surgery, Long Island Jewish-Hillside Medical Center, New Hyde Park, New York, performs axillary sampling and then irradiates the axilla.

Both he and Dr. Samuel Hellman, director of the Joint Center for Radiation Therapy, and chairman of the department of radiation therapy at Harvard Medical School feel that complete axillary dissection is unnecessary and produces too much edema. Mr. Hayward strongly disagreed. "There is no point in doing less", he declared, adding that "with a decently done, complete procedure and no irradiation edema is *never* a problem." Immediately following this declaration, there were loud murmurs and even a few catcalls from an otherwise well behaved audience.

Dr. Robert Goodman, professor and chairman of the department of radiation therapy, University of Pennsylvania School of Medicine and the Fox Chase Cancer Center, Philadelphia, Pennsylvania, closed that particular session. He expressed the hope that with several centres consistently performing one or the other axillary technique, with or without subsequent irradiation, a carefully executed, matched-pair analysis would soon be conducted.

Not all presentation at the conference involved controversy but instead provided practical clinical information. One such was entitled, "Physical Examination of the Treated Breast", which, according to Dr. William Silen, professor of surgery at the Harvard Medical School and surgeon-in-chief at Beth Israel Hospital, Boston, does not differ from that of the untreated breast. The trick, he told the audience, is knowing the characteristics of such breasts and the pitfalls which can cause confusion during examination.

Dr. Silen also explained the importance of noting changes once the anomalies are understood, declaring that the importance of a baseline examination "cannot be overemphasized". Breast self examination is important too, he said, and patients, as well as their physicians, need to know what is normal and what is not. He went on to explain that it is not uncommon to find that certain irregularities disappear after radiation therapy. There is also a likelihood of depigmentation of the nipple and areola, which may or may not be permanent.

Other skin changes which may occur include peau d'orange, an upward contraction of the breast caused by shrinkage, and telangiectasia. Lymphedema occurs in many patients and is no cause for alarm.

One of the pitfalls the examiner should avoid is failure to recognize surgical defects, Dr. Silen warned, explaining that some surgeons, for example, do not close the tissue after they remove a lump. This will cause scarring and the formation of a ridge. Other distortions can be caused by surgical approximation or fibrosis of the pectoral muscles. Finally, there can be residual induration at the site of the primary tumour. Being aware of these possibilities should minimize misdiagnosis of recurrent disease and avoid unnecessary surgery, he said. ■

CMAJ retrospect

"In the treatment of cancer there are still only three agents of proved value: surgery, electrocoagulation, and radium or x-ray. Except in so far as the diathermy or endothermy needle may replace the scalpel in local excisions or local explorations, electrocoagulation is not applicable to primary cancer of the breast. It is necessary, therefore, to decide whether a patient should be treated by surgery alone, by x-ray or radium alone, or by a combination of both."

— *CMAJ*, November 1936